

GENERAL NOTES

- ALL NOTES INCLUDED HEREIN ARE MADE PART OF EACH AND ALL MECHANICAL, ELECTRICAL AND PLUMBING SECTIONS OF WORK.
- REFER TO LANDLORD'S SPECIFICATIONS AND TENANT DESIGN CRITERIA FOR NECESSARY INFORMATION AND COORDINATION WITH OTHER TRADES.
- THE ABBREVIATION L5D&C WHEREVER IT APPEARS IN THE DRAWINGS, SHALL REFER TO "LBRANDS DESIGN AND CONSTRUCTION". ANY REFERENCE TO TENANT, BRAND SPECIFIC (VICTORIA'S SECRET, ETC.) OR FURNISHED BY ANY OF THE ABOVE REFERS TO L5D&C.
- ANY DISCREPANCY BETWEEN L5D&C DRAWINGS AND TENANT CRITERIA, L5D&C DRAWINGS SHALL TAKE PRECEDENCE.
- THE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC TO THE EXTENT THAT ALL INSTALLED ITEMS AND LOCATIONS ARE NOT EXACTLY PLACED AND ARE NOT TO BE SCALED.
- EACH CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELATED PERMITS AND INSPECTION FEES.
- BEFORE COMMENCING ANY WORK, CONTRACTORS SHALL REVIEW THE LATEST NATIONAL, STATE AND LOCAL CODE REQUIREMENTS INCLUDING LANDLORD CRITERIA AND PERFORM THE WORK IN STRICT ACCORDANCE WITH THESE. IN CASE OF CONFLICT THE STRICTER REQUIREMENTS WILL PREVAIL.
- NO ADDITIONAL COMPENSATION SHALL BE MADE FOR ANY CHANGE ORDERS DUE TO CONTRACTOR'S FAILURE TO VISIT THE JOBSITE AND/OR PREDETERMINE ALL EXISTING CONDITIONS BEFORE SUBMITTING HIS BID.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING CONDITIONS PRIOR TO SUBMITTING A BID. FOR THE PURPOSE OF SURVEYING EXISTING CONDITIONS, WHICH MAY AFFECT THE WORK TO BE DONE UNDER THIS SECTION, ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE GENERAL CONTRACTOR, L5D&C OR THE LANDLORD'S FIELD REPRESENTATIVE FOR CLARIFICATION.
 - AFTER BID, ANY QUESTIONS RELATING TO SPECIFIC M, E, OR P ISSUES ARE TO BE DIRECTED AS RFI'S THROUGH THE L5D&C PROJECT MANAGER.
 - SHOULD THE SPACE HAVE BEEN INACCESSIBLE FOR INSPECTION CONTRACTOR MUST INDICATE SO ON HIS BID.
- THE GENERAL CONTRACTOR'S FIRE SPRINKLER SUBCONTRACTOR SHALL DESIGN AND INSTALL FIRE SPRINKLER SYSTEM CONFORMING TO LANDLORD'S CRITERIA, TENANT'S REQUIREMENTS AND PER LOCAL CODES AND NFPA STANDARDS.
- THE CONTRACTOR, WITHIN FIFTEEN (15) DAYS OF THE AWARD OF THE CONTRACT, SHALL SUBMIT TO THE OWNER, SIX (6) COPIES OF A COMPLETE LIST OF MATERIALS AND EQUIPMENT PROPOSED FOR THE JOB INCLUDING ALL DATA, PART NUMBERS, RATING CAPACITY, SIZE, DIMENSIONS, ELECTRICAL DATA, GRADE, MANUFACTURER, AND ANY OTHER DESCRIPTIVE DATA FOR ALL EQUIPMENT OR SYSTEMS THAT DEViate FROM SPECIFIED ITEMS. ANY DELAYS OR COSTS DUE TO THESE DEVIATIONS, WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF ALL UNUSED OR ABANDONED MATERIALS AND EQUIPMENT, AND ITS REMOVAL OFF THE LANDLORD'S PREMISES.
- OWNER RESERVES THE RIGHT TO HAVE CONSTRUCTION REVIEWED BY AN OUTSIDE CONSULTANT PRIOR TO ACCEPTANCE OF THE PROJECT.
- EACH CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP RELATED TO HIS WORK FOR A MINIMUM PERIOD OF ONE YEAR FROM THE DATE WHICH THE OWNER ACCEPTS THE PROJECT. THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER OR TENANT SHALL CORRECT ANY DEFECTS IN MATERIALS OR WORKMANSHIP DURING THIS GUARANTEE PERIOD.
- EACH CONTRACTOR SHALL BE RESPONSIBLE AND ENSURE A CLEAN INSTALLATION ESPECIALLY IN EXPOSED CEILING AREAS. THE FINAL APPROVAL OF THIS WORK WILL BE ISSUED BY L5D&C PROJECT MANAGER.
- PROVIDE ONE SETS OF "AS-BUILT" DRAWINGS INTO PLANT TUBE AND ONE BOUND SETS OF ALL OPERATIONS MANUALS, DIAGRAMS, SERVICE CONTRACTS AND GUARANTEES IN BINDER TO STORE MANAGER. A REPORT PREPARED IN ACCORDANCE WITH MECHANICAL SPECIFICATIONS BY AN INDEPENDENT AIR BALANCE CONTRACTOR, HIRED BY GC, MUST BE INCLUDED IN THE CLOSE-OUT PACKAGE.

HVAC GENERAL NOTES

- THESE PLANS MAY BE USED FOR CONSTRUCTION ONLY AFTER APPROVAL IS OBTAINED FROM THE BUILDING DEPARTMENT MECHANICAL PLAN CHECK DIVISION AND THAT DIVISION'S STAMPED APPROVAL AND AUTHORIZED SIGNATURE APPEAR ON THE PLANS.
- COORDINATE ALL WORK WITH ALL TRADES INCLUDING BUT NOT LIMITED TO ELECTRICAL, PLUMBING, FIRE PROTECTION AND STRUCTURAL CONTRACTORS. INSTALL ALL WORK TO CLEAR NEW AND EXISTING ARCHITECTURAL AND STRUCTURAL MEMBERS. NO ITEM SUCH AS PIPE, DUCT, ETC. IS TO COME IN CONTACT WITH ANY EQUIPMENT.
- REFER TO ARCHITECTURAL DRAWINGS FOR DEMOLITION WORK.
- REFER TO ARCHITECTURAL DRAWINGS FOR EXACT FIXTURE LOCATION.
- CONTRACTOR SHALL PROVIDE CUT SHEETS TO LOCATE ALL EQUIPMENT AND DEVICES FURNISHED BY THE CONTRACTOR THAT DEViate FROM SPECIFIED ITEM FOR REVIEW AND APPROVAL PRIOR TO THE PURCHASE OF ANY SUCH EQUIPMENT OR DEVICES.
- HVAC CONTRACTOR IS RESPONSIBLE TO INQUIRE WITH THE LANDLORD'S REPRESENTATIVE ON ANY SMOKE EVACUATION SYSTEM IN USE AT THE HALL AT THE TIME OF THE BID. IF THE SAID SYSTEM IS NOT ADEQUATELY DESCRIBED ON THE DRAWINGS, THE MECHANICAL CONTRACTOR IS RESPONSIBLE TO INFORM THE GENERAL CONTRACTOR AND INCLUDE THE COST AS A SEPARATE LINE ITEM IN THE BID. NO ADDITIONAL MONIES SHALL BE AWARDED FOR TIE-IN REQUIREMENTS TO A LANDLORD'S SMOKE EVACUATION SYSTEM THAT IS IN EXISTENCE AT THE TIME OF THE BID, WITHOUT HAVING IDENTIFIED A SEPARATE LINE ITEM FOR THE SMOKE EVACUATION SYSTEM AT THE TIME OF THE BID.
- ACCESS TO ALL COMPONENTS AND EQUIPMENT MUST BE PROVIDED TO MEET CODE AND SERVICE/MAINTENANCE EASE.
- PRIOR TO STARTUP OF HVAC EQUIPMENT, MECHANICAL CONTRACTOR WILL CONFIRM WITH ONE OF THE LISTED HVAC MANUFACTURER REPRESENTATIVES THAT CORRECT POWER FOR EQUIPMENT HAS BEEN PROVIDED TO L5D&C PROVIDED HVAC UNITS AND HAS BEEN TURNED ON FOR A MINIMUM OF 24 HOURS. L5D&C RESERVES THE RIGHT TO CHECK CONSTRUCTION COMPLIANCE WITH PLANS AND SPECIFICATIONS. SHOULD THE OWNER FIND CORRECTIVE WORK TO BE NECESSARY, HE WILL NOTIFY CONTRACTOR OF SUCH WORK IN WRITING AND EXPECT COMPLIANCE PERFORMED WITH DUE DILIGENCE. IF ANY CORRECTIVE WORK IS DEEMED TO BE NECESSARY, THE COST OF REPAIRS WILL BE BORNE BY THE CONTRACTOR. THE MECHANICAL CONTRACTOR WILL THEN ENSURE THAT THE EQUIPMENT IS POWERED FOR A MINIMUM OF 24 HRS BEFORE START-UP.
- IF WORK IS REQUIRED BY L5D&C IN ORDER TO IMPROVE, CHANGE OR CORRECT AIR CONDITIONING OPERATIONAL CONDITIONS DUE TO: PART MALFUNCTION, WARRANTY OR OTHER INABILITY TO PROVIDE THE COMFORT CONDITIONS REQUIRED BY THE STORE, CONTRACTOR SHALL BE DIRECTED BY L5D&C TO ADDRESS THIS WORK IN A TIMELY MANNER. IF IT BECOMES EVIDENT THAT THE CONTRACTOR CANNOT ACCOMPLISH THE TASK, THEN AFTER 72 HOURS OF WRITTEN NOTICE THE OWNER MAY, AT HIS DISCRETION, TAKE OVER SUCH WORK AND BACK CHARGE THE CONTRACTOR FOR ANY CORRECTIVE WORK THAT WAS REQUIRED DUE TO LACK OF PERFORMANCE, WORKMANSHIP AND/OR ADHERENCE TO PLANS AND SPECIFICATIONS.
- UPON COMPLETION OF THE WORK, CONTRACTOR SHALL VERIFY THE PROPER WORKING ORDER OF THE SYSTEM(S) AND MAKE ANY ADJUSTMENTS AS REQUIRED.
- PROVIDE FILTER CHANGES THROUGHOUT CONSTRUCTION AS REQUIRED FOR ALL HVAC EQUIPMENT. PROVIDE FILTER CHANGES AT LEAST TWICE MONTHLY ONCE STARTED, PRIOR TO TEST AND BALANCE, AND LASTLY, PRIOR TO MERCHANDISING. ANY EQUIPMENT OR DUCTWORK THAT BECOMES SOILED DUE TO A LACK OF FILTER CHANGES, AS DETERMINED SOLELY BY THE L5D&C PROJECT MANAGER, SHALL BE CORRECTED ON BEHALF OF THE CONTRACTOR AND CHARGES BILLED TO THE CONTRACTOR.
- NOTES TO EQUIPMENT SCHEDULES USE THE WORDS "FURNISH" AND "PROVIDE", WHERE THE WORD "FURNISH" IS USED, SOME FIELD INSTALLATION IS REQUIRED BY THE CONTRACTOR, WHERE THE WORD "PROVIDE" IS USED, NO FIELD INSTALLATION IS REQUIRED AS THE DEVICES OR ACCESSORIES ARE FURNISHED AND INSTALLED BY THE MANUFACTURER AS PART OF THE EQUIPMENT WHEN SHIPPED.
- UNLESS OTHERWISE SPECIFIED, CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, MATERIAL, LABOR AND SUPERVISION NECESSARY TO COMPLETE THE HEATING, VENTILATING AND AIR CONDITIONING WORK IN ACCORDANCE WITH THE SPECIFICATIONS AND STANDARDS AS OUTLINED HEREIN. SEE RESPONSIBILITY SCHEDULE ON SHEET M04.01.
- MECHANICAL CONTRACTOR SHALL FIELD MEASURE EXISTING ROOF CURB(S) FOR CURB ADAPTER(S), WHERE APPLICABLE, AND SHALL SUPPLY DIMENSIONS TO L5D&C HVAC SUPPLIER PRIOR TO START OF CONSTRUCTION.
- ALL HEATING VENTILATING AND AIR CONDITIONING EQUIPMENT SHALL BE CLEARLY IDENTIFIED WITH TENANT'S NAME, SPACE NUMBER AND UNIT DESIGNATION AND SHALL BE STENCILED IN 4" HIGH BLACK LETTERS.
- FURNISH AND INSTALL ALL NEW DUCTWORK INCLUDING INSTALLATION OF OWNER SUPPLIED PLENUM BOOTS, SUPPLY AIR DIFFUSERS, AND RETURN AIR GRILLES. (SEE AIR DEVICE SCHEDULE ON THIS SHEET).
- A. ALL MATERIAL SHALL BE NEW AND OF COMMERCIAL GRADE AND BEAR UNDERWRITER'S LABORATORY AND UNION LABELS WHERE SUCH LABELING APPLIES.
- B. ALL PLENUMS SHALL BE FABRICATED FROM GALVANIZED SHEET METAL OF THE APPROPRIATE GAUGE AND BE INSULATED WITH A MINIMUM OF 1" THICK, 0.75 LB/CU.FT. DENSITY FIBERGLASS INSULATION WITH ALUMINUM FOIL BACKED VAPOR BARRIER.
- C. WHERE DESIGNATED, BRANCHES FROM MAIN LOW VELOCITY TRUNK DUCTWORK SHALL BE FURNISHED WITH SPLITTERS, DAMPERS OR SIMILAR BALANCING DEVICES IN ACCORDANCE WITH THE STANDARDS OF SMACNA.
- D. ALL DUCTS FOR FINAL CONNECTION TO DIFFUSERS SHALL BE CLASS 1, UL LISTED (SL 181) FLEXIBLE AIR DUCT NOT TO EXCEED 4'-0" IN LENGTH (THERMAFLEX, GLASFLEX, OR APPROVED EQUAL).
- E. SUPPLY AND RETURN DUCTWORK SHALL BE LINED AND WITH CODE COMPLYING BLANKET INSULATION. ACOUSTICAL LINER MAY BE PROVIDED. ALL MATERIALS SHALL COMPLY WITH N.F.P.A. 90A AND 90B. SEE SPECIFICATIONS ON SHEET M01.01.
- F. HANGER WIRES, DUCT STRAPS, FASTENING DEVICES, ETC. SHALL BE FASTENED TO THE STEEL JOISTS AND/OR BEAMS ABOVE. DO NOT ATTACH ANY SUCH ITEMS DIRECTLY TO FLOOR SLABS, PIPING, OTHER DUCTWORK, ELECTRICAL CONDUITS OR THE ROOF DECK ABOVE.
- G. ADDITIONAL FIEE DAMPERS SHOULD BE INSTALLED AS REQUIRED BY ANY APPLICABLE CODES AND/OR JURISDICTIONAL AUTHORITIES.
- SEAL AROUND PIPES AND DUCTS PENETRATING FIRE SEPARATIONS WITH LISTED AND APPROVED FIRE SEAL MATERIAL. ONLY LISTED AND APPROVED SEALANTS AND METHODS FOR THE SPECIFIC USE WILL BE PERMITTED.
- MECHANICAL CONTRACTOR SHALL INSTALL TEMPERATURE SENSORS AND AS SHOWN ON THE PLAN (VERIFY LOCAL CODES. IF PLAN LOCATION IS NOT ACCEPTABLE, IMMEDIATELY CONTACT L5D&C PROJECT MANAGER FOR DIRECTION.)
- UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL FULLY PRESSURE CHECK AND CHARGE ALL REFRIGERANT SYSTEMS (IF REQUIRED).
- THE CONTRACTOR SHALL ENGAGE THE SERVICES OF AN INDEPENDENT, AIR/WATER BALANCING COMPANY THAT IS A NEBB CERTIFIED CONTRACTOR OR HAS AN AABC CERTIFIED TEST & BALANCE ENGINEER. THIS COMPANY SHALL PERFORM THE BALANCING OF AIR/WATER SYSTEMS) AND MAKE ANY REQUIRED ADJUSTMENTS TO ENSURE PROPER WORKING ORDER. UPON COMPLETION, THE BALANCING COMPANY SHALL PROVIDE A COMPLETE SYSTEM REPORT.

GRAINGER NATIONAL ACCOUNT INFORMATION

COORDINATE WITH L5D&C PROJECT MANAGER FOR MORE INFORMATION.

HVAC EQUIPMENT COMMISSIONING

DETAILED HVAC COMMISSIONING INFORMATION IS INCLUDED IN THE L5D&C SITE MANUAL PROVIDED TO THE CONTRACTOR AT THE START OF THE PROJECT.

MANUFACTURER WILL CONTACT THE CONTRACTOR EARLY IN THE PROJECT TO SET PRELIMINARY DATES FOR HVAC INSPECTION, COMMISSIONING AND HVAC CONTROLS COMMISSIONING.

PRIOR TO HVAC INSPECTION / COMMISSIONING (TO BE COMPLETED BY MECHANICAL SUBCONTRACTOR)

- CONNECT AND BLEED CONDENSATE, DUCTWORK, NATURAL GAS, CHILLED WATER PIPING, AND/OR CONDENSER WATER PIPING.
- CHARGE HVAC SYSTEMS WITH REFRIGERANT FOLLOWING MANUFACTURERS' GUIDELINES AND INSTRUCTIONS. COLD WEATHER CONDITIONS REQUIRE SPECIFIC PROCESSES. CONTACT MANUFACTURER FOR TECHNICAL SUPPORT.
- CONNECT POWER TO THE HVAC EQUIPMENT FOR A MINIMUM OF 24 HOURS. NOTE: IN COLD WEATHER SITUATIONS, DO NOT OPERATE THE UNITS PRIOR TO COMMISSIONING!

HVAC EQUIPMENT SHOULD BE STARTED UP EARLY IN THE PROJECT. COORDINATE EARLY START UP OF EQUIPMENT WITH MANUFACTURER.

NOTE: THE GC MAY BE BACK CHARGED FOR ADDITIONAL AC SITE VISITS BEYOND THE FIRST THREE (3) NECESSARY TO DOCUMENT THE RESOLUTION OF THE HVAC PUNCHLIST ITEMS.

HVAC COMMISSIONING PROCESS

VISIT 1: HVAC EQUIPMENT START UP

- CONTRACTOR SHALL HAVE THE MECHANICAL AND ELECTRICAL SUBCONTRACTOR ON SITE DURING THE HVAC INSPECTION AND COMMISSIONING. BUDGET 5 HOURS FOR THE HVAC INSPECTION AND COMMISSIONING. (NOTE: THESE HOURS ARE TO BE USED FOR THE COMPLETION OF THE COMMISSIONING PROCESS ONLY. ADDITIONAL HOURS WILL NOT BE APPROVED FOR WORK THAT WAS IN SCOPE AND NOT COMPLETED PRIOR TO THE COMMISSIONING PROCESS.)
- CONTRACTOR TO COMPLETE AND EMAIL, OR FAX, THE HVAC EQUIPMENT START UP SURVEY TO MANUFACTURER PRIOR TO THE HVAC STARTUP. MANUFACTURER COORDINATES THE HVAC EQUIPMENT COMMISSIONING. CONTRACTOR IS RESPONSIBLE FOR COMMUNICATING SCHEDULE DATE CHANGES TO MANUFACTURER AND SUBCONTRACTORS.
- PROVIDED THERE ARE NO HVAC INSTALLATION PROCESS ONLY, THE SYSTEMS SHALL BE STARTED FOR TEMPORARY OPERATION ON LOCAL CONTROL.
- IF THERE ARE HVAC INSTALLATION PUNCHLIST ITEMS, THE GC MUST CORRECT THEM AND RESCHEDULE COMMISSIONING WITH MANUFACTURER.

VISIT 2: HVAC CONTROLS COMMISSIONING

THE CONTROLS COMMISSIONING IS PERFORMED BY THE MANUFACTURER IN CONJUNCTION WITH THE GENERAL CONTRACTOR AND THE MECHANICAL AND ELECTRICAL SUBCONTRACTORS. ALLOW FOR 4 HOURS TO COMPLETE THE CONTROLS COMMISSIONING. (NOTE: THESE HOURS ARE TO BE USED FOR THE COMPLETION OF THE COMMISSIONING PROCESS ONLY. ADDITIONAL HOURS WILL NOT BE APPROVED FOR WORK THAT WAS IN SCOPE AND NOT COMPLETED PRIOR TO THE COMMISSIONING PROCESS.)

FOLLOW THE CONSTRUCTION DRAWINGS AND MANUFACTURER'S DETAILS AND DRAWINGS DURING THE INSTALLATION OF THE HVAC CONTROL EQUIPMENT.

- CONTRACTOR TO COMPLETE AND EMAIL, OR FAX, THE CONTROLS COMMISSIONING SURVEY TO MANUFACTURER PRIOR TO THE CONTROL COMMISSIONING.
- CONNECT THE HVAC CONTROLS TO AN OPERATIONAL ANALOG PHONE LINE OR ETHERNET CONNECTION TO ALLOW COMMUNICATION. IF NECESSARY, UTILIZE SITE FAX LINE TO CONNECT TO THE CONTROLS MODEM IN THE F'S PANEL.
- CONTACT MANUFACTURER AT THE SCHEDULED TIME FOR THE CONTROLS COMMISSIONING.
- PROVIDED THERE ARE NO OPEN ISSUES, VISIT 2 IS COMPLETE. IN THE EVENT THERE ARE OPEN ITEMS, THE GC MUST CORRECT THEM AND RESCHEDULE THE CONTROLS COMMISSIONING.

VISIT 3: FINAL HVAC INSPECTION

THIS VISIT IS TO DO A FINAL INSPECTION OF THE HVAC EQUIPMENT AND CONTROL INSTALLATION. THIS VISIT MUST TAKE PLACE PRIOR TO CONSTRUCTION COMPLETION.

THE FOLLOWING ITEMS MUST BE COMPLETED PRIOR TO THE INSPECTION:

- HVAC SYSTEM INSTALLATION IS COMPLETE - NO OPEN PUNCHLIST ITEMS EXCEPT FOR POSSIBLY THE PERMANENT PHONE LINE.
- AIR BALANCE IS COMPLETE. NOTE: AIR BALANCE IS IN THE CONTRACTOR'S SCOPE OF WORK.

THE GC MUST COMPLETE TRANE'S SITE VISIT #3 SURVEY PRIOR TO THE VISIT BEING SCHEDULED.

THE CONTRACTOR IS RESPONSIBLE FOR HAVING THE MECHANICAL SUBCONTRACTOR AND THE ELECTRICAL SUBCONTRACTOR ON SITE DURING THE FINAL INSPECTION. BUDGET 4 HOURS FOR THE FINAL INSPECTION.

- THE CONTRACTOR IS RESPONSIBLE FOR COMMUNICATING SCHEDULE DATE CHANGES FOR THE FINAL INSPECTION.
- FILTERS ARE TO BE REPLACED DURING THIS VISIT. FILTERS ARE TO BE PROVIDED BY THE CONTRACTOR AND SHALL BE ON SITE WHEN THE TRANE TECHNICIAN ARRIVES.
- WHEN COMPLETE AND ALL OPEN CONTRACTOR HVAC ISSUES ARE RESOLVED A CONTROL NUMBER IS ISSUED BY THE MANUFACTURER. IT IS RECORDED INSIDE THE CONTROL PANEL DOOR IN THE F'S ELECTRICAL PANEL AND ON THE FINAL VISIT CHECK LIST.
- IN THE EVENT THERE ARE OPEN ITEMS, THE CONTRACTOR MUST CORRECT THEM AND RESCHEDULE THE FINAL INSPECTION WITH MANUFACTURER. GC IS RESPONSIBLE FOR REPLACEMENT OF SHEAVES, PULLEYS, AND BELTS, IF NEEDED.
- THE HVAC CONTROL NUMBER WILL BE ISSUED AT THE END OF THE VISIT PROVIDED THERE ARE NO UNRESOLVED HVAC PUNCHLIST ITEMS.

THE TRANE TECHNICIAN WILL WRITE THE HVAC CONTROL NUMBER ON THE STICKER INSIDE THE WR CONTROLS PANEL (F'S PANEL) AND ON THE FINAL VISIT CHECK LIST.

NATIONAL ACCOUNTS HVAC SUPPLIER GENERAL NOTES

HVAC EQUIPMENT NOTED HAS BEEN PREPUNCHED BY LIMITED STORE DESIGN & CONSTRUCTION. WITHIN THE FIRST WEEK OF CONSTRUCTION, THE GENERAL CONTRACTOR OR THEIR MECHANICAL SUBCONTRACTOR SHALL NOTIFY SUPPLIER VIA EMAIL.

THE EMAIL SHALL STATE THE PHONE NUMBER, EMAIL ADDRESS AND DELIVERY ADDRESS OF THE CONTACT PERSON RESPONSIBLE FOR SCHEDULING AND RECEIVING THE HVAC EQUIPMENT AND ACCESSORIES. EQUIPMENT AND ACCESSORIES ARE TO BE SHIPPED BY ANY SPECIAL SHIPPING INSTRUCTIONS REQUIRED OR REQUESTED. ALLOW A MINIMUM OF TWO WEEKS AFTER CONSTRUCTION STARTS FOR DELIVERY. UNLESS SPECIAL ARRANGEMENTS ARE MADE PRIOR TO THE START OF CONSTRUCTION.

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL SHIPPING COST INCURRED IF DELIVERY IS REQUIRED PRIOR TO THE STANDARD TWO WEEKS SCHEDULED.

IF THIS INFORMATION IS NOT SENT TO NATIONAL ACCOUNT SUPPLIER, THEN THE EQUIPMENT AND ACCESSORIES WILL BE SHIPPED IN ACCORDANCE WITH THE PURCHASE ORDER DATE AND INSTRUCTIONS ISSUED BY L5D&C AND THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR UNLOADING AND STORAGE OF EQUIPMENT UNTIL SUCH TIME AS REQUIRED FOR INSTALLATION ON PROJECT.

IF OWNER'S REPRESENTATIVE IS PERFORMING START UP, THEN GC AND/OR MECHANICAL CONTRACTOR MUST COORDINATE WITH MANUFACTURER REP. 2 WEEKS PRIOR TO CONSTRUCTION END DATE.

TRANE CONTACT INFORMATION

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ABBREVIATIONS - MECHANICAL

AABC	AMERICAN AIR BALANCE COUNCIL	ESQV	EQUIVALENT	ODB	OPPOSED BLADE DAMPER
A/C	AIR CONDITIONING UNIT	ESP	EXTERNAL STATIC PRESSURE	OD	OUTSIDE DIMENSION OR DIAMETER
AB	ABOVE	EWG	ELECTRIC WATER COOLER	OPNG	OPENING
AD	ACCESS DOOR	EXH	EXHAUST	OS	OUTDOOR AIR
AFD	APPROVED FIRE DAMPER	F	FAHREWEIT	P	PUMP
AFF	ABOVE FINISH FLOOR	FU	FAN COIL UNIT	PD	PRESSURE DROP
AHU	AIR HANDLING UNIT	FLA	FULL LOAD AMPS	PLBG	PLUMBING
AP	ACCESS PANEL	FLX	FLEXIBLE	PRV	PRESSURE REDUCING VALVE
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS	FPM	FEET PER MINUTE	PSI	POUNDS PER SQUARE INCH
		FPS	FEET PER SECOND	RA	RETURN AIR
BDD	BACK DRAFT DAMPERS	G	GAS	RAG	RETURN AIR GRILLE
BEL	BELOW	GAL	GALLONS	RAR	RETURN AIR REGISTER
BHP	BRAKE HORSEPOWER	GALV	GALVANIZED	RG	RETURN GRILLE
BLDG	BUILDING	GC	GENERAL CONTRACTOR	RH	RELATIVE HUMIDITY
BOD	BOTTOM OF DUCT	GPM	GALLONS PER MINUTE	RPM	REVOLUTIONS PER MINUTE
BOP	BOTTOM OF PIPE	GMF	GALLONS PER MINUTE	SA	SUPPLY AIR
BTUH	BRITISH THERMAL UNIT PER HOUR	HD	HEAD	SAG	SUPPLY AIR GRILLE
		HP	HORSEPOWER	SAR	SUPPLY AIR REGISTER
CAP	CAPACITY	HTR	HEATER	SCH	SCHEDULE
CD	CEILING DIFFUSER OR CONDENSATE DRAIN	HVAC	HEATING VENTILATING AND AIR CONDITIONING	SCN	SENSIBLE
CFM	CUBIC FEET PER MINUTE	HWR	HOT WATER RETURN	SF	SUPPLY FAN, SQUARE FOOT
CHWR	CHILLED WATER RETURN	HWS	HOT WATER SUPPLY	SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
CHWS	CHILLED WATER SUPPLY	ID	INSIDE DIAMETER	SOV	SHUT-OFF VALVE
CLC	CEILING, COOLING	IN	INCH	SP	STATIC PRESSURE
CO2	CARBON DIOXIDE	KW	KILOWATT	SQ	SQUARE
CON	CONNECTION OR CONNECTOR	LL	LANDLORD	SQ FT	SQUARE FEET
CONT	CONTINUOUS	L	LONG	SS	STAINLESS STEEL
CONTR	CONTRACTOR	LB	POUND	TEMP	TEMPERATURE
COP	COEFFICIENT OF PERFORMANCE	LF	LINEAR FEET	TG	TRANSFER GRILLE
CWS	CONDENSER WATER RETURN	LD	LINEAR DIFFUSER	TSP	TOTAL STATIC PRESSURE
		LD	LINEAR DIFFUSER	TSTAT	THERMOSTAT
		LD	LINEAR DIFFUSER	TYP	TYPICAL
DB	DEGREE	MAX	MAXIMUM	UC	UNDERCUT
DET	DETAIL	MBH	THOUSAND BTU PER HOUR	UH	UNIT HEATER
DIA	DIAMETER	MCA	MINIMUM CIRCUIT AMPACITY	UN	UNLESS OTHERWISE NOTED
DISCH	DISCHARGE	MD	MOTORIZED DAMPER	UTR	UP THRU ROOF
DL	DOOR LOUVER	MECH	MECHANICAL	VAV	VARIABLE AIR VOLUME
DN	DOWN	MFR	MANUFACTURER	VENT	VENTILATION, VENTILATOR
DTR	DOWN THRU ROOF	MOC	MAXIMUM OVER CURRENT PROTECTION	VFD	VARIABLE FREQUENCY DRIVE
DWG	DRAWING	MTD	MOUNTED	VTR	VENT THRU ROOF
		MTR	MOTOR		
EA	EXHAUST AIR	NEBB	NATIONAL ENVIRONMENTAL BALANCING BUREAU	W	WATT
EAG	EXHAUST AIR GRILLE	N.C.	NORMALLY CLOSED	WC	WET BULB
EAS	EXHAUST AIR REGISTER	N.C.	NORMALLY CLOSED	WG	WALL CLEANOUT
EAT	ENTERING AIR TEMPERATURE	N.C.	NORMALLY CLOSED	WT	WATER GAUGE
ECC	ELECTRICAL CONTRACTOR	N.C.	NORMALLY CLOSED		WEIGHT
EFF	EFFICIENCY	N.C.	NORMALLY CLOSED		
EG	EXHAUST GRILLE	N.C.	NORMALLY CLOSED		
ELEC	ELECTRIC	NTS	NOT TO SCALE		
ENCL	ENCLOSURE				

LENNOX ROOFTOP UNIT SCHEDULE (ELECTRIC HEAT)

MARK (RTU-#)	1			
TRANE PACKAGE NUMBER	N/A			
MODEL / EER	LCH304L / 10.8			
AIR FLOW (CFM)	12,000			
OA FLOW / MIN. OA FLOW (CFM)*	1716 / 930			
AMBIENT OAT (F)	95			
EXT. SP. (IN. W.G.)	1.5			
DX COOLING COIL				
EAT (FDB/WB)	80.0 / 67.0			
TOTAL (BTU / HR)	378,500			
SENSIBLE (BTU / HR)	287,660			
ELECTRIC HEAT				
INPUT (WATTS)	30,000			
OUTPUT (BTU / HR)	102,354			
STAGES	2			
ELECTRICAL				
VOLTS/Ø/HZ	460/3/60			
MOTOR (HP)	10			
MCA (AMPS)	78			
MOC (AMPS)	90			
APPROX. WEIGHT (LBS)	3,734			
ACCESSORIES	1-6,9,10,13			
NOTES	1-2			
ACCESSORIES ("S" INDICATES STANDARD; "O" INDICATES OPTIONAL):				
1. S-FACTORY PROVIDED DISCONNECT SWITCH.				
2. S-FACTORY PROVIDED DUCT SMOKE DETECTOR IN RETURN AIR AND REMOTE TEST STATION. (MODEL SSK451).				
3. S-FACTORY PROVIDED SUPPLY AIR SENSOR.				
4. S-FACTORY PROVIDED DRY BULB ECONOMIZER AND HOOD WITH BIRDSCREEN. SOME FIELD ASSEMBLY REQUIRED.				
5. S-FACTORY PROVIDED NON-POWERED EXH. CONVENIENCE OUTLET.				
6. O-FACTORY PROVIDED POWER EXHAUST FOR RELIEF. AIR. SOME FIELD ASSEMBLY REQUIRED.				
7. O-FACTORY FURNISHED WITH DEHUMIDIFICATION (HOT GAS REHEAT) OPTION.				
8. O-FACTORY PROVIDED COASTAL CONDENSER COIL AND EVAPORATOR COIL COATING.				
9. O-HAIL GUARD.				
10. O-FURNISHED WITH 14" HIGH FACTORY FABRICATED ROOF CURB.				
11. O-CURB ADAPTER PROVIDED BY MECHANICAL CONTRACTOR.				
12. O-SINGLE ZONE VAV.				
13. PROVIDE INTERFACE AS REQUIRED SO THAT NEW TRANE CONTROLS CAN BE USED WITH NEW LENNOX RTU.				
NOTES:				
1. REFER TO CONTROL WIRING SCHEMATICS FOR ANY FIELD INSTALLED CONTROL DEVICES NOT FACTORY INSTALLED.				
2. FIELD SET MINIMUM OUTSIDE AIR AS SPECIFIED ABOVE. OUTSIDE AIR DAMPER SHALL FULLY CLOSE ON UNIT SHUTDOWN.				
* MINIMUM OA FLOW IS THE AREA COMPONENT OF THE MINIMUM VENTILATION RATE BASED ON ASHRAE STANDARD 62.1-2007 FOR RETAIL SALES SPACE (0.12 CFM/SQ.FT), TABLE-1.				

FAN TERMINAL UNIT SCHEDULE

MARK (FPVAV-#)	1			
TRANE PACKAGE NUMBER	D17			
MODEL	VSEF1605			
FAN SIZE	0650			
INLET SIZE	16" DIA.			
MAXIMUM PRIMARY AIR FLOW (CFM)	3,000			
MINIMUM AIR FLOW (CFM)	300			
FAN PERFORMANCE				
MAXIMUM AIR FLOW (CFM)	2100			
EXTERNAL STATIC (IN. W.G.)	0.5			
FAN MOTOR, HP	47/2			
FAN MOTOR VOLTAGE	277/1/60			
ELECTRIC HEAT				
POWER INPUT (WATTS)	6,000			
HEAT OUTPUT (BTU/HR)	20,471			
STAGES	1			
ELECTRIC HEATER VOLTAGE	480/3/60			
ELECTRICAL				
VOLTS/Ø/HZ (WIRES)	480/3/60 (4)			
FAN MOTOR AMPS	3.8			
ELECTRIC HEATER AMPS	7.2			
MCA (AMPS)	13.8			
MOC (AMPS)	15			
APPROX. WEIGHT (LBS)	117			
ACCESSORIES	1-2			
NOTES	1			
ACCESSORIES ("S" INDICATES STANDARD; "O" INDICATES OPTIONAL):				
1. S-FACTORY PROVIDED DISCONNECT SWITCH.				
2. S-FACTORY PROVIDED CONTROL TRANSFORMER.				
NOTES:				
1. REFER TO CONTROL WIRING SCHEMATICS FOR ANY FIELD INSTALLED CONTROL DEVICES NOT FACTORY INSTALLED.				

VAV TERMINAL UNIT SCHEDULE

MARK (VAV-#)	1	2		
TRANE PACKAGE NUMBER	NA	NA		
MANUFACTURER	TRANE	TRANE		
MODEL	VCE10	VCE14		
INLET SIZE	10	14		
MAXIMUM AIR FLOW (CFM)	1005	2400		
MINIMUM AIR FLOW (CFM)	370	880		
ELECTRIC HEAT				
INPUT (WATTS)	5,000	12,000		
OUTPUT (BTU / HR)	17,059	40,942		
STAGES	1	1		
VOLTS/Ø/HZ	480/3/60	480/3/60		
MCA (AMPS)	7.5	18.0		
MCEP (AMPS)	15.0	20.0		
WEIGHT (LBS)	81	108		
ACCESSORIES	1-2	1-2		
NOTES	1-2	1-2		